

Validation of the Parenting Styles and Dimensions Questionnaire in Indian Sample

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Abstract

Baumrind has conceptualized parenting styles and has proposed a three-factor higher-order model that includes authoritative, authoritarian, and permissive styles. This study aimed to examine the factor structure and psychometric properties of the 32 items short version of the Parenting Styles and Dimensions Questionnaire (PSDQ). Through purposive sampling, data were obtained from 500 parents of adolescents in the age range 10-15 years. Exploratory factor analysis and confirmatory factor analysis were performed. Our findings did not support the higher-order model for the PSDQ. Furthermore, the two-factor model for PSDQ comprising authoritative (15 items) and authoritarian (10 items) was a better fit for the Indian sample. Additionally, the criteria for internal consistency reliability, convergent validity, and discriminant validity were adequate. The findings of the study contribute to existing literature. For the assessment of parenting styles, the researchers and various mental health professionals may rely on this PSDQ validated in India.

Keywords: adolescents, authoritative parenting, authoritarian parenting, parenting styles, validation

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Introduction

Research on family relationships has depicted parents' role in the emotional and social development of adolescents (Kern & Jonyniene, 2012; Desjardins et al., 2008; Bi, et al., 2018). Developmental psychologists regarded the way parents influence the development of children as a parenting style. The most widely used typology of parenting styles was given by Baumrind (1971) and Maccoby and Martin (1983). They categorized parenting styles based on two independent bipolar factors: warmth (responsiveness) and control (demandingness). The product of these two factors results in three prototypes of parenting: Authoritative parenting (parents who show both responsiveness and control in a balanced form), authoritarian parenting (parenting style having high control but low warmth), and permissive parenting (parenting having high responsiveness but low control).

Parenting styles have a great impact on adolescents as shown in various research studies conducted in the last two decades (e.g. Alami, et al., 2014; Kuppens & Ceulemans, 2019; Sasi & Mathew, 2018; Perez-Gramaje, et al., 2019; Smetana, 2017; Williams & Ciarrochi, 2019). According to Lee et al., (2018), most of the research studies are conducted in western societies, using Baumrind's typology of parenting styles. This typology of parenting has also been a focus of interest in Asian research on parenting (Chao, 2001; Sharma, & Pandey, 2015; Singh, 2017).

The increasing number of research studies on parenting styles leads to the development of valid and reliable psychometric instruments for its assessment (e.g. PAQ: Buri, 1991; PCRQ: Furman & Giberson, 1995; PAC: Reitzle, et al., 2001; PSDQ: Robinson, et al., 1995; PARQ: Rohner, 2005).

One of the most popular instruments to measure Baumrind's (1971) classification of parenting styles is the Parenting Styles and Dimensions Questionnaire (PSDQ: Robinson, et al., 2001) developed by American authors. This instrument has been internationally recognized and can be used worldwide (Olivari et al., 2013). Original PSDQ comprised 62 items (Robinson et al., 1995) which were then reduced to a shorter form having 32 items (PSDQ: Robinson, et al., 2001). PSDQ short form is increasingly popular (Morowatisharifabad et al., 2016) and is used in a large number of studies conducted on parenting and family relationships (Sharma & Sandhu, 2006; Winsler et al., 2005).

Although PSDQ has been widely used among diverse cultural groups, its proper psychometric analysis is lacking in the Asian context especially in India. The need for the current study was felt due to questions raised by researchers concerning the use of PSDQ in the Asian context (Chao, 2001; Choi et al., 2013a). The existing scales measuring parenting styles were mostly developed by researchers in western countries. Therefore, it depicted the western norms of child-rearing where individualistic culture is prominent. While

elaborating their argument over western designed instruments of parenting styles, researchers firmly assert that these instruments may be useful for comparative purposes, but may not fully capture the essence of parenting in Asian countries having collectivistic cultures (Choi et al., 2013b; Dwairy, 2010; Kim & Wong, 2002; Sharma & Sandhu, 2006). Parenting styles have different meanings and implications in different socio-cultural contexts. Therefore, the current study extends this line of work and is an attempt to fill the research gap in the extant literature on parenting studies in the Asian context. Moreover, to our knowledge, no studies have been conducted to assess the psychometric properties of PSDQ in the Indian context.

The main aim of the present study is to test whether the original three-dimensional factor structure of PSDQ can be replicated in the Indian context. More specifically, the research question the present study will attempt to answer is: Does the factor structure of PSDQ remain the same in the Indian context? To this end, we conducted this study to explore the factor structure of PSDQ and provide psychometric properties of the instrument. In addition, we confirmed the factor structure of PSDQ in a different sample of parents of adolescents.

Method

Participants and Procedure

The overall sample consisted of 500 parents of adolescents between 10-15 years of age studying in classes 6th to 9th in schools of Jammu city. The parents were in the age group of 30-58 years ($M=41.39$; $SD=5.705$). Further, 289 were females (57.8%) and 211 were males (42.8%). Data were collected using the purposive sampling technique. After seeking written permission from the school authorities, data from 565 parents were collected through their children. Next, a consent form (for informed consent) and a questionnaire were sent to the parents. Only 538 parents returned the filled-in forms. After eyeballing, 17 forms were incomplete and 21 forms having unengaged responses were discarded. Thus, the final sample of 500 parents.

Measures

Demographics. Information was collected for the sociodemographic details of the sample: parents' age, gender, educational qualification, age of the child about whom responses are, birth order of the child, and gender.

Parenting styles. Parenting styles were assessed using the Parenting Styles and Dimension Questionnaire (PSDQ). It comprises 32 items that measure three parenting styles, namely authoritative (15 items), authoritarian (12 items), and permissive (5 items). Each item of the questionnaire is evaluated on a five-point Likert scale ranging from 1 (Never true) to 5 (Always true). The scale has shown to have adequate reliability for each subscale authoritative ($\alpha = 0.86$), authoritarian ($\alpha = 0.82$) permissive ($\alpha = 0.64$) (Robinson et al., 2001).

Data Analyses

The preliminary data analysis, descriptive statistics, and exploratory factor analysis (EFA) were done using SPSS version 23. AMOS version 24 software was used for conducting the confirmatory factor analysis (CFA).

To examine the factor structure of PSDQ, data obtained from 500 parents were randomly split. EFA was performed on a sample of 120 parents (63 males: 52.5%; 57 females, 47.5%; mean age=41.33; $SD=5.80$). CFA was run on a sample of 380 parents (150 males: 39.5%; 230 females, 60.5 %; mean age=41.69, $SD=5.67$).

Results

Exploratory and Confirmatory Factor Analysis

To confirm sampling adequacy and for verifying the appropriateness of data for running EFA, Kaiser-Meyer-Olkin ($KMO>0.5$) and significant Bartlett's test of sphericity were considered (Hair et al., 2009). Factors were retained based on total variance explained by each factor and eigen values ≥ 1 . Principal component analysis with varimax rotation was applied to check the factor structure. Items having cross-loadings were deleted.

For CFA, to assess model fitness comparative fit index ($CFI \geq 0.90$), Chi-square divided by degrees of freedom ($\chi^2/df \geq 5$), the goodness of fit ($GFI \geq .90$), normed fit index ($NFI > .90$), root mean square of error approximation ($RMSEA \leq .10$), and standardized root mean square residual ($SRMR \leq .10$) were considered (Bentler, 1990; Weston & Gore, 2006).

First, to validate PSDQ in the Indian context CFA was done. The first-order model included seven constructs of parenting styles (three for authoritative and authoritarian styles each, and one for permissive parenting style). Model fit indices ($\chi^2/df = 1.92$, $GFI=0.88$, $NFI=0.92$, $CFI=0.96$, $SRMR=.03$, $RMSEA=0.04$) indicated

that the model fit the data well. The HTMT values ranged from 0.98 to 0.99 which is beyond the threshold of 0.85 (Henseler et al., 2015). Therefore, discriminant validity could not be established. The sub-dimensions of authoritative and authoritarian parenting styles were indistinguishable.

Consequently, we conducted EFA to ascertain the factor structure of PSDQ in Indian settings. Detailed results of EFA are presented in Table 1. The KMO index of 0.95 indicated excellent sampling adequacy. Bartlett's test of sphericity was statistically significant ($\chi^2=3226.45$;

$df=435$; $p<.001$). Three factors emerged for PSDQ which are similar to the previous findings (Robinson et al., 2001). Accordingly, based on the literature review, these factors were named authoritative parenting style, authoritarian parenting style, and permissive parenting style (Robinson et al., 2001). Two items were deleted due to cross-loadings, i.e. "I use physical punishment as a way of disciplining our child" and "I explode in anger toward our child" from the authoritarian parenting dimension. The Cronbach alpha coefficient for each subscale was adequate (Table 1).

Table 1 Result of Exploratory Factor Analyses

Construct/Item	Factor loadings	Eigen value	Variance explained (%age)	Cronbach Alpha
Authoritative parenting		16.03	38.43	0.97
A1	.769			
A2	.713			
A3	.807			
A4	.802			
A5	.751			
A6	.712			
A7	.797			
A8	.803			
A9	.796			
A10	.804			
A11	.804			
A12	.816			
A13	.823			
A14	.802			
A15	.824			
Authoritarian Parenting		2.63	18.88	0.96
AT1	Deleted			
AT2	.640			
AT3	.516			
AT4	.490			
AT5	.601			
AT6	Deleted			
AT7	.508			
AT8	.675			
AT9	.514			
AT10	.625			
AT11	.706			
AT12	.588			
Permissive Parenting		1.21	8.95	0.65
P1	.798			
P2	.598			
P3	.701			
P4	.651			
P5	.768			

Note: A=Authoritative, AT= Authoritarian and P=Permissive

Next, the factors extracted by the EFA were cross-validated by conducting CFA. The initial model with three-factors comprising authoritative, authoritarian, and permissive parenting style ($\chi^2/df=1.90$, GFI=0.88, NFI=0.92, CFI=0.96, SRMR=0.04, RMSEA=0.05) showed good model fit. Items with SRWs < 0.50 were deleted from the factor permissive parenting style (Hair et al., 2009). Consequently, the remaining

Table 2 Reliability and Validity Analysis

Factors of PSDQ	SRW	AVE	CR
Authoritative Parenting		.667	.968
A1	.82		
A2	.79		
A3	.84		
A4	.86		
A5	.83		
A6	.75		
A7	.87		
A8	.87		
A9	.80		
A10	.84		
A11	.80		
A12	.83		
A13	.78		
A14	.80		
A15	.77		
Authoritarian Parenting		.722	.963
AT2	.84		
AT3	.84		
AT4	.87		
AT5	.83		
AT7	.84		
AT8	.86		
AT9	.82		
AT10	.89		
AT11	.84		
AT12	.86		

Note: A=Authoritative, AT= Authoritarian, SRW= Standardized regression weight, AVE= Average variance extracted, CR= Composite reliability

Table 2 shows the composite reliability (CR) of the factors of PSDQ namely authoritative and authoritarian parenting styles which is greater than 0.70 (Hair et al., 2009). Thus, internal consistency reliability was established.

Next, convergent and discriminant validity of the PSDQ were assessed as indicators of construct validity. Table 2 shows AVE for the dimensions authoritative and authoritarian parenting styles are above the set criteria of 0.50

three items of the permissive parenting dimension were also dropped because of the low value of AVE (0.35). The final model converged to two factors (authoritative and authoritarian parenting style) having 25 items (SRWs >.50; Hair et al., 2009), with acceptable model fit indices ($\chi^2/df=2.05$, GFI=0.90, NFI=0.94, CFI=0.97, SRMR=.03 RMSEA=0.05).

(Hair et al., 2009). It indicates that convergent validity exists in our model. For assessing discriminant validity, Heterotrait-Monotrait (HTMT) criterion was used where the value of $HTMT \leq .85$ (Henseler et al., 2015) indicates adequate discriminant validity for constructs. Discriminant validity exists for the dimensions of authoritative and authoritarian parenting styles as the HTMT value is 0.73 which is lower than the set threshold value of 0.85.

Discussion

The purpose of this study was to examine the underlying factor structure of PSDQ in Indian settings. Analyses were conducted on the original 32 item PSDQ reflecting three parenting styles: authoritative, authoritarian, and permissive. The CFA performed on the 30 items derived from EFA results confirmed only two dimensions of PSDQ with a good fit between the model and the data.

The current findings did not support the higher-order model for the measurement of parenting styles. The measurement model included three constructs of authoritative parenting style namely democratic participation, reasoning/induction, warmth and involvement; three constructs of authoritarian parenting style namely punitive strategies, verbal hostility, corporal punishment; and single construct of permissive parenting styles. The first-order model results showed that the sub-dimensions of the authoritative and authoritarian parenting styles were indistinguishable. Probably when the parents in India reflect on authoritative parenting style they find only a subtle difference in democratic participation, reasoning/induction, warmth and involvement. Similarly, with respect to authoritarian parenting style, the parents find punitive strategies, verbal hostility, and corporal punishment to be quite similar. Hence, the factor structure of the original PSDQ does not capture the parenting styles of parents in India.

By performing an EFA we concluded that the three-factor structure of PSDQ is applicable in the Indian context. Accordingly, three factors were named as authoritative, authoritarian, and permissive parenting styles comprising 15, 12, and 5 items respectively. However, the CFA findings did not provide support for the first-order three-factor model in our study. Further, the findings provided preliminary support for PSDQ with a two-factor structure measuring authoritative and authoritarian parenting styles only. The dimension permissive parenting style was dropped. Moreover, our findings indicate that the items of the permissive parenting scale lack internal consistency and convergent validity. Several previous studies have reported the permissive style is the least reliable of the three factors of parenting styles (Alizadeh et al., 2007;

Daglar et al., 2011; Haycraft & Blissett, 2010; Latouf & Dunn, 2010; Olivari et al., 2013; Önder & Gülay, 2009; Rhucharoenpornpanich et al., 2010; Sharma & Sandhu, 2006).

It is not surprising to have a two-factor structure of PSDQ. The factor structure of PSDQ has been reported to vary in the previous studies (Sharma & Sandhu, 2006, Zhou et al., 2004). Robinson et al. (1995) claim that the parenting style is a stable construct therefore PSDQ could be applied in multicultural settings. However, the results of our study based on data from parents in Indian settings did not support the permissive parenting style dimension of the PSDQ which is in line with past research (Pedro et al., 2015). In fact, the Lithuanian, Turkish, and Portuguese versions of PSDQ also reveal the same trend (Kern & Jonyniene, 2012; Önder & Gulay, 2009; Pedro et al., 2015).

Our findings also establish sound psychometric properties of the two-factor structure of PSDQ. The internal consistency reliability measured by Cronbach's alpha coefficients for two subscales was above .70 cutoffs. Further, the convergent validity (AVE>.05) and discriminant validity were established. The two subscales retained were linked to the constructs as theoretically conceived by Baumrind (1971) and did not differ from Robinson, et al.'s (2001) original PSDQ. As expected, the indicators of authoritative and authoritarian parenting styles converged on their respective factors and diverged from each other.

The need to validate PSDQ in Indian settings stems from the unavailability of the measure with established psychometric properties. Even the very recent studies reveal use of PSDQ without validating the measure in Indian context (e.g., Nimbalkar et al. 2020; Sahithya & Raman, 2021). Parenting styles differ across cultures. Thus, our study addressed the gap by validating PSDQ to assess parenting styles in India. As opposed to the original scale, the factor structure of PSDQ is different in the Indian context.

Limitations and Implications

Our research is not without limitations. There are some limitations of the study which need to be addressed in the future. First, we could not assess the temporal validity of PSDQ. The repeated administration of the questionnaire to

ascertain the temporal validity could be considered in future research. Secondly, the PSDQ was in the English language. English is the second or third language for many people in India demands for the requirement for the Hindi version of the PSDQ. Thus, future studies should focus on the translation of PSDQ in Hindi and examine its psychometric properties.

Despite these limitations, the findings of the study added valuable knowledge to the existing literature on PSDQ in the Indian context. The study can be used as the basis for future research related to the factor structure of PSDQ. The reliability and validity findings could be useful for other researchers who want to further explore PSDQ in the Asian context. The two-factor scale that emerged in this study could be useful for family therapists, counsellors, and school psychologists to assess the parenting styles.

Conclusion

The current findings provide preliminary evidence in support of the application of PSDQ in the Indian sample. The research question was adequately addressed, as our findings suggest that two factor model of PSDQ can be used which has a good model fit along with acceptable reliability and validity. Although most parts of the original model were retained, dissimilar results may be due to the sample heterogeneity and different socio-cultural context.

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